

# Upflow and Downflow Gas-Fired Furnaces

## HANG ON WALL NEAR FURNACE

This 58B unit has been approved by the American Gas Association Laboratories and carries all required safeguards against fires and accidents. Such occurrences will take place only if the unit is mistreated or not properly maintained.

The operation and care of your unit is simple and easy. By following these operating and maintenance procedures, you can expect to receive better, longer, and more reliable service from your new Carrier appliance.

### Here Are a Few "Do's" and "Don'ts"

- **Do** become familiar with wallcard instructions.
- **Do** use filters. Check them periodically and make sure that they are clean.
- **Don't** set your thermostat too low. Ideal comfort zone is usually between 72 F and 78 F.
- **Don't** be a "thermostat juggler." Frequent changing of your thermostat can increase your operating costs.
- **Don't** turn your furnace off just because you'll be away for a day or more. It takes quite a while to restore comfort — but it costs relatively little to maintain it.
- **Don't** block registers with furniture. Don't put a lamp, TV or radio too near your thermostat. This will cause it to give a "false" reading.

### Here's How Your Heating System Works

The furnace operates automatically. It is controlled by a thermostat which you set at the temperature most comfortable to you. When the inside temperature drops below this setting your thermostat senses this and turns on the system.

First the gas valve opens, and the burners are lighted by your pilot. After a few moments, the blower turns on automatically. The air it moves over the element is warmed and goes on thru the ducts to room registers.

When the temperature in the room reaches the thermostat setting, the gas valve closes and the burners are turned off. The blower continues a few moments until the heat in the element is used up. Then it turns off, too.

All forced air furnaces are equipped with high temperature limit switches (one on most upflow models, two on other types) that prevent the furnace from overheating by turning off the burners if the blower fails to come on. Except on downflow furnaces, these switches should recycle automatically, causing the burner to go on and off. On downflow models, the second of the two switches used requires manual reset. (Reset button is on furnace top.)

### Here's How You Get Greater Satisfaction

The following steps are very easy to perform. So before you get ready to light your furnace pilot make sure that you have gone thru the list.

1. Open all warm air registers and make sure that all return air grilles are unobstructed.
2. Set room thermostat below room temperature.
3. If a humidifier is installed with your system, open the water supply valve.
4. If a line voltage switch is provided in the furnace circuit, make sure that it is turned to the "Off" position.
5. Make sure that the main burner and pilot manual gas shutoff valves are closed. "On" and "Off" positions are clearly marked.
6. Wait five minutes for unit to be purged of gas, and then get ready to start the burner.

**STARTING YOUR BURNER** — Lighting instructions are also shown on rating plate located on or near burner compartment door. Should any doubt exist in your mind concerning proper lighting procedures, call your gas serviceman to light unit.

1. *After five minute wait for unit to be purged of gas, turn unit electric switch to "Off."*
2. Open the pilot manual gas shutoff valve.
3. Light the pilot with a match or taper.

*NOTE. If your unit is equipped for 100 percent shutoff, it will be necessary to reset the safety valve before you can relight the pilot*

5. Open the main burner manual gas shutoff valve.
6. Turn the unit electric switch to "On."
7. Set your thermostat to the desired room temperature. On heating/cooling systems, set the system switch to "Heat," and the fan switch to "Auto." or "Cont." That's all there is to it.

**OPERATING FAN CONTINUOUSLY (FAN SWITCH SET ON "CONT")** — Your distribution system will perform at its best if the furnace fan is run continuously when weather outdoors is 40 F or less. This will eliminate cold floors and hot ceilings and provide for a more constant temperature.

1. On heating only models, turn the summer switch (located on the furnace) to the "On" position.
2. On heating/cooling models, turn the thermostat fan switch to "Cont."
3. If your needs are not met by Step 1 or 2, see your dealer for specific instructions.

**STOPPING YOUR UNIT** — Follow these simple procedures to put your unit into “retirement” for the summer.

1. Close the main burner manual gas shutoff valve.
2. Close the pilot manual gas shutoff valve.
3. Turn the unit electric switch to “Off.”
4. Close humidifier water supply valve (if unit is equipped with a humidifier).

**MAINTAINING YOUR UNIT** — The life of your system depends on the care you give it. Proper care assures good performance; lack of it can damage the unit (*and invalidate your warranty*).

Here are the things you should do, or have your dealer serviceman do for you.

*NOTE: Before you start, turn off all electrical power to unit and turn thermostat to “Off.”*

**Keeping Filters Clean** — As a homeowner, this is your most important responsibility. A dirty filter reduces efficiency of your system, causing erratic performance of controls and resulting in damage to the motor or heating element.

1. Inspect filters at regular intervals depending upon dirt conditions. On new homes, check the filter every week for four consecutive weeks to begin with. In all cases, inspect your filters at least every two or three weeks when the system is in constant operation. *Replace filters at the beginning of each season — and thereafter as needed.*
2. If you have disposable-type filters and they are moderately dirty, clean with vacuum or tap lightly over newspaper. Replace filter with arrows pointing in the direction of air flow. (Turn dirtiest side toward return air stream to prevent dirt from being blown into supply air when the blower is started.) Replace disposable filters with same type after one cleaning.
3. If you have permanent-type filters and they become extremely dirty, they can be cleaned with hose and water. Be sure to spray expandable aluminum-type filters with a filter coat after each washing. Your dealer has this available in handy spray cans. If your filter is a Duralast type, this coating is not necessary. (Ensure that filters are thoroughly dry before replacing them.) Some permanent-type filters may be vacuum cleaned or shaken out. It's not necessary to wash them. *Check the manufacturer's recommendations.*

*NOTE: Do not operate unit with blower door removed.*

**Lubricating Motors** — Direct drive motor and blower assemblies are factory lubricated and seldom require oiling. Frequency and amount of oiling depends upon usage and climatic conditions. Consult your dealer serviceman for specific instructions. Belt drive motor and blower assemblies should be oiled at the beginning of each season with a good grade of non-detergent SAE No. 20 motor oil. Oil cups are at each end of the motor.

*NOTE: Do not overoil motor. Three drops in each oil cup is enough. (More will attract dirt.)*

**Keeping Heater Element Clean** — In your general furnace housekeeping, don't forget the heater element. It's a good idea to have your dealer serviceman check the heat exchanger at the start of each heating season, and *if necessary* perform the following procedures.

1. Make sure that all utilities are turned off.
2. Remove burners, manifold assembly, vent connectors, and draft diverter.
3. Remove flue baffles from upper flue outlet.
4. Clean flue ways with brush or vacuum cleaner.
5. Replace baffles, ensuring rear of baffle engages dimple in heating element. Secure screws carefully so that heating element will be leak tight.
6. Replace remaining parts; turn on utilities.
7. Test for leaks.

#### **Here's A Handy Checklist**

If your furnace fails to operate properly, first check the following. It may save you the cost of a service call.

1. Is your room thermostat set correctly? On heating/cooling systems, the thermostat system switch should be turned to “Heat;” the fan switch to “Auto.” or “Cont” (continuous fan operation).
2. Are the power and gas both on?
3. Are the filters clean?

If the answer to these questions is “Yes,” and the furnace still doesn't operate properly, call your Authorized Carrier Dealer for service.

DEALER'S NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

SERVICE: Day \_\_\_\_\_ Night \_\_\_\_\_

MODEL NO. \_\_\_\_\_ SERIAL NO. \_\_\_\_\_

DATE INSTALLED \_\_\_\_\_

For replacement items, use Carrier specified parts.

Manufacturer reserves the right to change any product specifications without notice.

**CARRIER AIR CONDITIONING COMPANY • SYRACUSE, NEW YORK**